

Serial No. 09/830,030

IN THE SPECIFICATION:

Change the paragraph bridging pages 6 and 7 to read:

Also, JP-A-52-119611 discloses deforming walls for the purpose of adjusting thermal stress or deformation due to mechanical stress on the plane perpendicular to the longitudinal direction of the cells (passage direction), but due to the same problem as with that in JP-A-5-123580, does not contribute to improved catalyst capabilities. Also, the description in JP-A-52-119611 that the amplitude of the wall deformation (sine wave) deformations are is smaller than the wall thickness reduces stress focusing on the deformed portions of the walls, but does not agree with the aggressive increase of interaction between exhaust gas and the walls, with is the essence of the present invention.

Change the paragraph bridging pages 40 and 41 to read:

Also, the ~~black~~ back hole channel member 54 serves to lead the material to the slits 55, and generally, the positioning is such that the intersecting portions of the walls of the honeycomb structure match the center of the back holes 53. The slit member 56 defines the form and structure of the honeycomb

structure, and the material extruded from the slits form the walls.

Change the paragraph bridging paper 58 and 59 to read:

Fig. 23 is an example of a polymer fuel cell system. With a fuel cell system, extracting hydrogen 72 at an early stage from fuel 58 such as methanol, natural gas, modified gasoline, etc. that has been transported to the modifier 67 of the fuel cell, sending the hydrogen 72 to the fuel cell stack 65, and effectively reacting the hydrogen 72 with oxygen at the fuel cell stack 65 to extract electricity, is necessary for the effectiveness of the modifier 63, and for improving the overall operating efficiency of the entire fuel cell system. The polymer fuel cell system also includes CO₂ remover 64, electric motor 66, heat 68, and air 70. Raising the temperature of the catalyst within the modifier 63 at an early point is important, this being the same operation as that of the exhaust gas purification catalyst, and using the undulated-wall honeycomb structure is effective for raising the efficiency of the modifier 63 and also enables the modifier 63 to be reduced in size. Conventionally, pellet catalyst was used for the modifier 63, but using the honeycomb structure allows modifying catalyst

to be configured with low pressure loss, high surface area, and low thermal capacity, leading to further effectiveness by use of the undulated-wall honeycomb structure. Also, the fuel cell stack 65 generally uses a structure wherein carbon separators and solid polymer electrolytic film are laminated, to which a honeycomb structure can be applied, and using the undulated-wall honeycomb structure enables increasing efficiency and hence reduction in size. Fuel cell stack 65 generates direct current 60 to run electric motor 66. Use as a hydrogen-separating filter can also be conceived. With the present example, the structure of the modifier 63 is such that fuel 58 which has passed through a de-sulfurizing device 62 and water vapor pass through the catalyst using the undulated-wall honeycomb structure. This is also true for mid-scale dispersion generation and Solid Oxide Fuel Cells (SOFC) used for large-scale generation.